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Banking Reform in Transition Countries

Stijn Claessens

The institutional capacity of banks in transition economies improves faster when a new or parallel private banking system is allowed to emerge than it does when the government tries simply to reform existing state-owned banks. Banking reform should stress decentralized institution-building and penalties for weak banks.

Background paper for *World Development Report 1996*

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Summary findings

In reforming the financial sector in transition economies, one important debate is about whether governments should try to reform existing state-owned banks — the *rehabilitation* approach — or whether a new private banking system should be allowed to emerge — a *new entry* approach. Or should there be a mix of the two approaches, in which the activities of state banks are restricted while a parallel private banking system develops?

Claessens's cross-country comparison of banks' institutional development in 25 transition economies suggests that progress can be faster under the new entry approach, especially relative to initial conditions. Progress under the rehabilitation approach appears to be inhibited by poor incentives.

In most countries, even those with a good banking infrastructure and a large segment of good banks, a two-track process has evolved, with large and growing differences between weak and strong banks. Whatever the banking reform approach taken, weak banks have moved very little beyond central planning.

Regression estimates suggest that in transition economies three things are associated with slow progress of weak banks: overconcentration, preferential treatment by governments, and limited entry for new banks. The direction of causality is often unclear. Policies and structural conditions can affect bank quality, but whenever a banking system has a certain quality, particular policies may also arise or structures exist.

The role of banks will remain limited in many transition economies because of weak legal infrastructures, much uncertainty and inside information, and problems associated with highly leveraged financial intermediaries — including fraud, political interference, and implicit guarantees. In the short run, self-finance and intermediation among enterprises and through nonbank financial institutions may prevail.

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BANKING REFORM IN TRANSITION-COUNTRIES

by

Stijn Claessens
World Development Report 1996
World Bank

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BANKING REFORM IN TRANSITION-COUNTRIES

Summary

Two different approaches to banking reform in transition countries can be distinguished: *new entry* and *rehabilitation*. The *new entry* approach entails the spontaneous breakup and privatization of existing state banks, the entry of many new banks, and in some cases the liquidation of old banks. It is illustrated by Estonia and Russia. Many countries in the NIS have chosen this approach. The *rehabilitation* approach emphasizes the recapitalization of existing state banks together with extensive programs to develop them institutionally and eventually to privatize them. Breakups and new entry are relatively limited. This approach is exemplified by Hungary and particularly Poland in recent years. Many countries in the CEE have chosen this approach. In practice, influenced by initial conditions and early developments, countries (including the examples mentioned) have included aspects of both approaches or have yet to choose a consistent financial approach strategy.

Much of the debate about financial sector reform in transition economies involves the weights to be placed on the various aspects of the *new entry* or *rehabilitation* approach. It is not easy to tell what balance is best suited for a particular economy. Reform approaches and their success depend on initial conditions (such as institutional legacy and the depth of the financial system) and progress in other, complementary reforms (such as enterprise and legal reform). Whether a particular approach is succeeding is also difficult to say: different initial conditions, external shocks, the complex relationships between banking and other reforms, and the short time period which has passed make the impact of financial reform on transition economies hard to measure. The institutional development of banks, a prerequisite for developing a good financial system, is currently then also the most meaningful indicator to assess progress in banking reform. Since the variety in approaches has led to large differences in institutional capacity, both within and among transition economies as well as relative to other countries at similar income levels, there are some useful lessons on banking reform for transition economies and potentially also for other economies.

To obtain a cross-country comparison of the degree of institutional development of banks, a questionnaire was conducted among financial sector specialists and central staff in the World Bank. It covered twenty-five transition countries with a wide variety of banking approach approaches and six comparator countries. The survey distinguished segments of better and weaker banks within each country. The following key patterns, suggesting lessons, emerged:

- Progress in institutional development can be faster under *new entry* than under *rehabilitation*. The better segments of some countries pursuing the *new entry* approach (for example, Estonia, Russia) are now at par with some countries pursuing the *rehabilitation* approach and with countries at similar income levels, even though their starting conditions were worse. This suggest that choosing the *rehabilitation* approach strategy when faced with a weak institutional legacy can be a poor policy as progress is slow.

- A two-track process has also evolved in many countries with large and growing differences between strong and weak banks. The weak banks of almost all countries have not evolved much compared to central planning, even in transition economies with relatively good banking supervision and infrastructure. Many weak banks often only survive because of preferential treatment from the government or through attracting household deposits by offering above-market interest rates. As a result, fair competition for better new, private banks is limited.

Across countries, the institutional quality of banks also relates to certain policy measures and structural variables.

- A more liberal entry policy for domestic banks is associated with better strong banks, but also worse weak banks. The higher the number of banks, the higher the quality of the best segment, but also the lower the quality of the worst segment (new entry through banks started by state enterprises is particularly associated with weaker banks). Furthermore, the share of banking assets held by the top five banks has a negative relationship with overall bank quality. These relationships likely reflect the effects of innovation and increased competitive forces—positive for the better banks and negative for the weaker banks—and a widening distribution of banks when entry is more liberal. They also suggest that oligopolistic structures inhibit progress of the financial system in transition economies, particularly when maintained by state-ownership (the number of state-owned banks has a negative relationship with the quality of best as well as worst banks).

- Better troubled bank intervention and formal recapitalization programs are positively related to bank quality. The quality of banking infrastructure (especially interbank market) has also a positive association with the quality of the banking system.

- The higher the share of currency in broad money, the lower the quality of banks. This suggests that households act rationally: they will keep their money in cash if the banking system is poor. The higher the share of the private sector in GDP, the better the quality of banks, suggesting that enterprise reform is a complement to banking reform (and vice-versa).

- Initial conditions are still reflected in the current quality of banks. Both *new entry* and *rehabilitation* approach countries with less distorted initial conditions and a higher level of development have better quality banks. But approaches do matter as there are many outliers—both better and worse—relative to initial conditions. In particular, there are many worse outliers among the weak banks, again suggesting that many weak banks continue to receive preferential support.

Some of these patterns reflect not only causal relationships, as policies and structural conditions matter, but also reverse relationships, as particular policies more likely arise or structures more likely exist whenever the banking system has a certain quality. Policy recommendations thus do not easily follow.

BANKING REFORM IN TRANSITION-COUNTRIES

Of the many debates about financial approach in transition economies, an important one is whether governments should try to reform (rehabilitate) the existing state-owned commercial banks or whether a completely new or parallel banking system should be allowed to emerge. While much has been written about this,[1] in the end it is an empirical question: which approach leads the quickest to a good financial system for a given country. Since there has been a wide variety of banking reform approaches across countries, and given that the starting positions and many other policies of transition economies were relatively similar[2] while banking reform policies have differed greatly, one should be able to draw some lessons from comparing progress in building a financial system, lessons which may not only be useful for transition economies, but also for other countries. The paper tries to make this comparison by using the results of a survey of World Bank staff on the quality of banks and banking in transition economies.

The structure of the paper is as follows. In the first section I start out with describing—in a stylized fashion—the two approaches transition economies have taken to banking reform, *new entry* and *rehabilitation*. I also relate these approaches to initial conditions and progress in other areas of reform, particularly macroeconomic stabilization and enterprise and legal reform, as these have influenced both banking reform approaches as well as outcomes. In the second section, I argue that it is difficult to measure the progress in banking reform with the measures conventionally used for developing and developed countries, such as the impact on economic growth, investment, the efficiency of the financial system, etc. Basically, large shocks, the complex relationships between banking and other reforms, and the short time period which has passed make the impact of financial reform on the economy and the banking sector itself hard to measure. I argue therefore that the institutional development of banks, a prerequisite for developing a good financial system, is currently the most meaningful indicator to assess progress in banking reform in transition economies. To measure institutional progress, I rely on a survey of World Bank staff who were asked to compare the capacity of banking systems across transition economies and other countries. The section provides the results from this survey, distinguishing stronger and weaker parts of the banking system in each country. It also provides measures of the quality of the banking environment, including banking regulation and supervision.

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[1] General references on financial approach in transition economies are Saunders and Walter 1991, Bonin and Szekely 1994, Caprio, Folkerts-Landau and Lane 1994, Dittus 1994a and 1994b, Pohl and Claessens 1994, Caprio 1995, Borish, Long and Noel 1995, and Bonin and Mizsei, 1995.

[2] Relative to the greater variety one observes in the rest of the world. The transition economies have very similar legacies in their financial system which are well discussed in McKinnon 1991 and Kornai 1992. All started with a mono-bank, which was split at different points in time into a two-tier system with a central bank and a number of commercial banks, often specialized by sector. Banks initially acted as accounting agencies, keeping track of the financial transactions that resulted from planned allocations. Banks were also the passive recipients of household savings, which were often the only asset households could hold. Normal banking skills, including risk management, project screening and selection, and a diversified menu of instruments to attract savers, were not present. The other components of a financial system, including the payments system, were rudimentary. Nevertheless, there are some differences in legacies and in the last section I try to correct for the current quality of financial systems for those differences.

The third section relates indicators for the quality of banks to banking reform approaches and derives some general lessons. It argues that the speed of institutional progress has been faster when entry into banking was rapid. The section also relates the progress across countries to specific government policies in an effort to identify which policies matter most and in what way. Four individual factors appear to have a positive relationship with the quality of both the stronger and weaker banks in each country: the quality of troubled bank intervention (in large banks), the intensity of bank recapitalizations, the attitude towards entry of new (domestic) banks, and the activity of the interbank market. There is a negative relationship between the degree of new banks established by state enterprises and the quality of banks. The fourth section relates the progress in establishing good banks to structural factors and initial conditions. It finds that the higher the share of currency in broad money, the lower the quality of banks, and the higher the share of the private sector in GDP, the better the quality of banks. Countries with less distorted initial conditions and a higher level of development also have better quality banks. The fifth section provides some conclusions.

1. Introduction

Banking reform approaches

Two very different approaches to banking reform, *new entry* and *rehabilitation*, can be distinguished. In practice, influenced by initial conditions and early developments, countries have included aspects of both approaches or have yet to choose a consistent financial reform strategy. The distinction is to some extent regional: many Newly Independent States (NIS) have followed mostly the *new entry* approach towards banking reform, while most transition economies in Central and Eastern Europe (CEE) and the Asian transition economies (China and Vietnam) have tended to follow mostly the *rehabilitation* approach. The *new entry* approach has entailed the spontaneous break-up and privatization of state banks, a (de-facto) policy of liberal entry of new banks, and sometimes the liquidation of old banks. The approach is best illustrated by Russia and Estonia where it resulted in a rapid expansion in the number of banks, in Russia from 5 in 1989 to 2,500 in 1995. The *new entry* approach has not always been a deliberate policy choice. In Russia, for example, the confusion surrounding the breakup of the Union created an environment where entry was basically very liberal, as there was little central control (it was almost free as only minimal legal requirements needed to be satisfied and minimal capital requirements were at times less than $10,000). Enterprises established new banks and, as old state banks were broken up, local governments and enterprises captured parts. As a result, many new banks emerged. The *rehabilitation* approach has included recapitalization and institutional development of existing state banks, some limited breakups of banks, limited privatization, and more limited entry. Typical *rehabilitation* approach countries are Hungary and particularly Poland in the last few years. The current debate about further financial sector approach in many transition economies, particularly the NIS and the Asian transition economies, involves choices between (aspects of) these two approaches.[3]

[3] The banking reforms in the particular countries mentioned do not conform exactly to all mentioned aspects of a certain approach. In Estonia, for example, government support was provided to some banks. And in Poland, entry early on was quite liberal. Nevertheless, it provides a rough classification of reform approaches. Gorton and

Relationships between banking reform and other reforms

The banking reform approaches are related to initial conditions and macro-economic developments and other reforms since the start of transition. Reform approaches have been influenced the most by institutional legacy and macroeconomic developments. Legal and enterprise reform have played an important role in determining the progress in banking reform.[4]

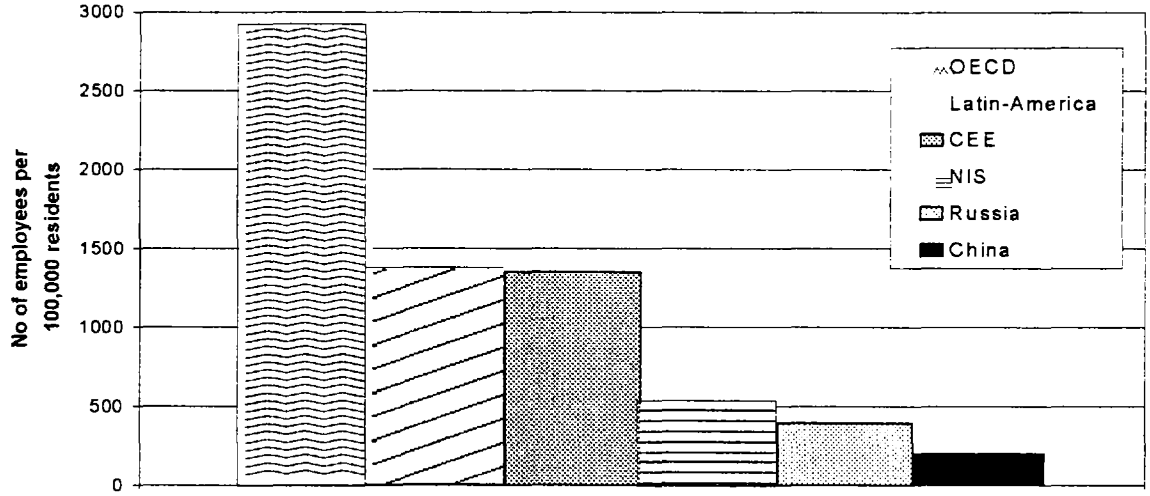
The institutional legacy at the start of the transition: *rehabilitation* reformers have most often better and *new entry* reformers worse legacies. Many CEE countries started from a much stronger institutional base than other transition economies. This was for a number of reasons: some CEE countries had initiated earlier banking reforms—Hungary, for example, split its mono-bank already in mid-1980s, and many had already started complementary reforms (i.e., legal and enterprise reforms); most CEE-countries could also draw from a pre-war legal framework; and in general CEE-countries have closer linkages to market-economies, leading not only to some transfers of know-how but also to competition in financial services from market-economies. These initial conditions are still reflected in the quality of the financial systems in CEE, including the number of bankers (Figure 1).[5] In part because of these better starting positions, most of the CEE countries chose for the *rehabilitation* reform strategy. Countries in the NIS on the other hand had worse starting conditions and many choose not to try build on what was there, but start afresh and pursue the *new entry* approach.

Wilton 1996 provide a conceptual framework and analyze some of the tradeoffs involved in banking reform in transition economies, particularly the issue of stability (associated with low entry and low exit) versus efficiency.

[4] Annex Table 1 provides some data on the banking systems in transition economies and some comparator countries which illustrates the differences in these factors across countries. It provides the depth of the financial system (broad money as a share of GDP, M2/GDP), data on the structure of the banking system (share held by biggest five banks, total number of banks, and number of state banks), information on formal bank recapitalizations, the relative employment in financial services (employment per 100,000 of population), and a measure of the confidence in the financial system (currency as a share of M2).

[5] This worse legacies of the NIS compared to CEE is also confirmed in the proxies of initial conditions developed by de Melo at al. (1996). See further section 4.

Figure 1: Employees in Banking (per 100,000 residents)



Notes: The numbers refer to employees in the real estate sector and the whole financial sector, not just banking; data are for 1994 for NIS and for 1993 for other countries. The Latin American countries included are Brazil, Colombia, Mexico and Venezuela.

Macro-developments: Typical *rehabilitation* reformers are high financial-depth countries and *new entry* reformers are low financial-depth countries (Figure 2). Macro-developments (i.e., inflation) determine the extent to which (bad) loans are wiped out through negative real interest rates. This influences the need to recapitalize banks, which in turn affects the choice of approach strategy and the role for the government. In general, in countries with low financial depth, old banks are more marginalized, economic as well as political, which makes governments less interested in supporting the banking system, and the *new entry* approach is more likely.[6] There is a reverse link between macro developments and banking reform as well: a greater extent of bad loans—as a consequence of an initially more distorted enterprise sector—results in a more difficult macro environment, which often means higher inflation and negative real interest rates. Vice-versa, high financial-depth countries may have had relatively lower amounts of bad loans as they had better initial conditions in the real economy—and often also better complementary policies, which made high inflation less likely and the *rehabilitation* approach relatively more attractive (as, for example, there will be less of an urgency to deal with a crisis).[7]

Related to this has been the fiscal situation: in many NIS, fiscal revenues have dropped dramatically since the onset of transition, while in CEE revenues have remained relatively high. As a consequence, governments in the NIS had little choice but to ignore the problems of the banking—and banks were on "hard" budget, while in CEE larger fiscal revenues "afforded"

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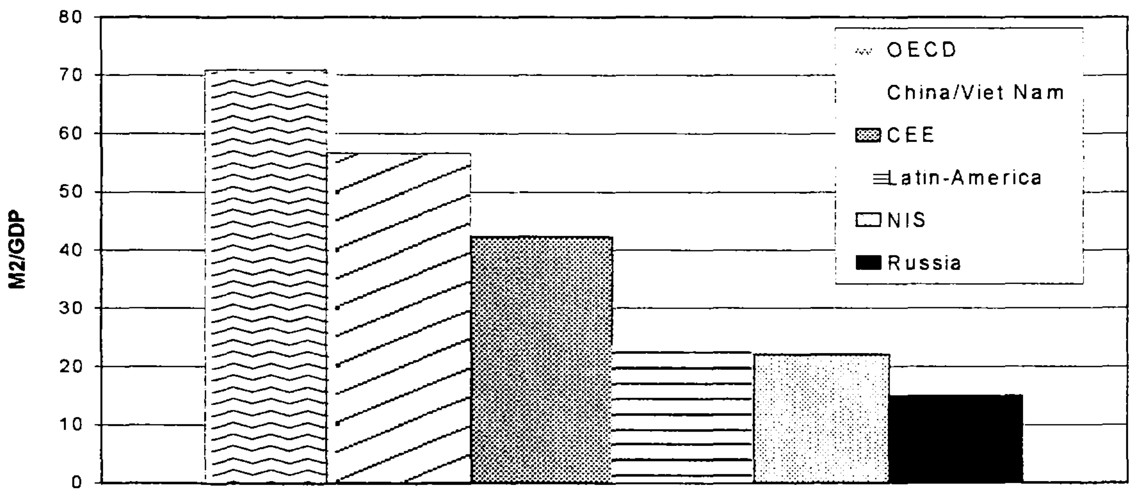
[6] Exceptions to this pattern exist of course. In Poland and Slovenia, for example, financial depth is relatively low, but bank approach has been more rehabilitation, and in Armenia, Belarus and Ukraine, financial depth is even lower, but as financial sector approach has been little, old banks still command great power.

[7] Of course, many bad loans are "endogenous" with respect to bank and enterprise managers' behavior and neither macro nor initial conditions are the key causes.

governments to recapitalize banks—and banks could thus be on a "softer" budget.[8] Low financial depth and the limited potential role of banks in transferring resources to enterprises, has in turn also encouraged quasi-financial intermediation among enterprises. In many transition economies, interenterprise claims now exceed bank claims. As enterprises often have a better assessments of creditworthiness of other enterprises than banks in transition economies do, this has some benefits. As high inflation wiped out their debts, enterprises also have become relatively richer and are now financing their investments out of own their resources. Relative to many market economies, the roles of self-finance and quasi-financial intermediation are thus more important in many transition economies.

Figure 2: Financial Depth
(domestic currency component of M2 as a share of GDP)



Notes: End-of-1994 data; IMF and World Bank Staff estimates. corrected for the effects of high inflation by taking the average of quarterly M2/GDP ratios. Data are also reported in Annex Table 1. The Latin American countries included are Argentina, Mexico and Venezuela.

Legal and enterprise reform The pace of legal and enterprise reform has in particular affected the evolution of the financial system. Banks rely on the legal system, including procedures for collateral recovery and bankruptcy, to enforce their claims and perform their roles as monitors of firms. Progress in these and other economic laws is needed for financial systems to become more effective. In general, CEE countries have made more progress than NIS. Enterprise restructuring is needed to resolve the bad loan problem and to create new lending opportunities. Better firms create the demand for better banking services and so advance institutional progress in the banking sector. In the Baltics and the NIS many banks were established or acquired by state enterprises. The quality of governance of these banks depends on whether their owners are privatized and ownership is diversified. Substantial enterprise

[8] This hardness or softness of the budget constraint is vis-à-vis the governments; because of the highly negative interest rate in many NIS, banking was extremely profitable, with the costs born by depositors.

privatization and the entry of new private firms is also a precondition for large-scale bank privatization to produce meaningful benefits.[9]

2. Progress in Banking Reform

Can one define and rank outcomes of reform approaches?

Financial reform approaches and outcomes are, however, not just determined by initial conditions or complementary reforms; policies matter too, if not just at the margin. Can one therefore answer the question: which reform model leads the quickest to a "healthy" financial sector for a country with certain initial conditions? One form of analysis would be to look at the actual effects of the financial system on the real economy, and then ask, for example, what type of financial system is associated with higher economic growth. This is a very difficult question to answer, however, for a number of reasons. First, it hard to characterize a financial system or a reform model objectively. Second, even in stable developed countries it is difficult or impossible to "rank" the different financial systems that are in use now or in (recent) history in terms of their impact on the economy.[10] For transition economies, this is even more difficult as there has not been sufficient time for the impact of financial reforms to become apparent, many "shocks" (policy changes as well as real shocks) have occurred, uncertainty remains high, and there are many linkages between the various reforms.

Another form of analysis would be try to evaluate the functioning of the financial sector alone, based on its input and outputs, and associated efficiency indicators. For example, the level of financial intermediation (relative to GDP) and its changes over time, the amount of lending (short and long-term, to private sector and state enterprises), intermediation costs, and the evolution of the relative employment in the financial sector could be used as indicators of financial sector development and performance. Again, these indicators are difficult to use for transition economies as their economic systems are still unstable. In addition, numerous data and methodological problems arise, and at most some indicators of the level of financial depth can be used on a systematic cross-country basis.[11]

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[9] An alternative distinction sometimes made for banking reform approaches is *decentralized* (where banks work out their problem loans) versus *centralized* (where loans are restructured or forgiven on the basis of general principles and/or where the state takes a larger role). To some extent this distinction already overlaps with the distinction *new entry* versus *rehabilitation*. The NIS have centrally "resolved" much of the bad loan problems through hyper-inflation, which in part has allowed the *new entry* approach. In CEE, decentralized approaches have been attempted, which requires bank recapitalization, and the banking approach has thus more stressed *rehabilitation*. The distinction *decentralized* versus *decentralized* does have the advantage that it highlights the necessary complementary reforms for the banking approach to work, particularly enterprise restructuring for the *rehabilitation* approach. The speed under the *rehabilitation* approach may then also more reflect the speed of complementary reforms (e.g., privatization).

[10] See, among others, Allen and Gale 1995, Walter 1993, and Saunders and Walter 1994.

[11] Levine and Demirguc-Kunt forthcoming, for example, study in detail financial sector development in developed countries and more advanced developing countries (in relation to stock market development). As an empirical measure of the differences in financial development between countries, they use an index which is a combination of

It is thus unavoidable to use some other, intermediate objective. Since the main weakness of the financial system in transition economies is the weak institutions and lack of human skills, institutional development should be a very useful key intermediate measure. The question of evaluation reform approaches becomes then "which reform approach creates the quickest progress in establishing the institutions and human skill necessary for a good financial system (which can perform its roles of resources mobilization, payment services, project screening and asset allocation, corporate governance, etc.)." Subquestions are "which specific government policies contribute the most (or the least) to progress in establishing the institutions and human skill necessary for a good financial system." The step from having a good institutional framework to a good financial system can, of course, not be taken for given as it will be influenced by many other factors, including the incentive framework for banking and the evolution of complementary reforms. Countries with good bankers may still experience bad banking as the incentives can be poor.[12]

How to measure institutional development?

It is obviously difficult to evaluate institutional development in absolute terms. For this reason, a detailed questionnaire was conducted of World Bank financial sector specialists in the regional and central departments which focused on cross-country comparisons. The questionnaire asked interviewees to score countries on a number of indicators of institutional development. All together, 58 indicators resulted, subdivided in three categories: quality of banking regulation, supervision and intervention; infrastructure for banks (payment systems, accounting); and the quality of banks themselves. For the banks, the respondents were asked to distinguish—where appropriate according to their judgment—better from worse segments of the banking system in each country. As the choice was left to the respondent, the categories better and worse are thus not absolute, but rather indicate whether it was deemed useful to distinguish these two categories given the quality distribution of all banks in the country.[13] The difference between the two classes was most often described as state versus newly private or privatized, but sometimes small versus large, and regional versus national. The difference was only described as foreign (including joint ventures) versus domestic banks in three countries.

Altogether 57 questionnaires for 31 countries were collected, that is, on average 1.8 questionnaire per country, with three respondents for most of the important countries. All respondents had extensive cross-country experience in the financial sector issues, which should improve the quality of their responses. In the end, differences of opinion on particular questions were actually few and judgments were seldom far apart (if anything, there was more disagreement about facts than about judgments). Annex Table 2 lists the number of respondents and the

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ratios of various financial assets and liabilities to GDP. This suggests that at best these indicators could be used across transition economies.

[12]In the Czech Republic, for example, conflicts of interest may arise as banks indirectly—through the equity stakes of the investment funds they control—have a large influence over firms, while also being creditors of the same firms. Similar questions have arisen concerning the cross-ownership of banks, funds, and enterprises in Russia.

[13] Vice-versa, if the distinction was not made, it does not mean that there were not good or bad banks, but just that the distribution was probably less wide.

number of differences of opinion per country.[14] While the judgments remain subjective—and thus reflect their particular experiences,[15] and also may reflect what respondents want to see in a good banking system, the close answers in case of more than one respondent provides some degree of comfort.

How does institutional development look across countries?

Using the answers from this survey, a composite indicator for the quality of banks was created. In particular, the first principal component of the answers for 31 questions was derived, using the best and worst segment in each country as independent observations. The first principal component explains about 60% of the variations on all individual questions. This indicator for the quality of banks thus allows for a broad comparison of the progress in building the institutional foundation for a financial system. Figure three provides the scores for the quality of banks, best, worst and average, where the countries are ranked according to the score for the quality of the best segments, and the average is weighted according to the size of the worst and best segments. The individual scores are reported in Annex Table 3. Note that the first principal component is an index with a mean of zero and standard deviation of one. As these underlying scores reflect subjective judgments, the first principal component and corresponding country rankings should of course be considered accordingly.

Figure three makes clear that the better banks in transition economies differ greatly in institutional capacity, among each other as well as compared to other countries at similar income level. None of the transition economies have banking systems of the quality in countries such as Denmark, Greece, and Spain. The most advanced transition economies have better parts of their banking system that are comparable to those in middle-income countries such as Argentina, Turkey and Venezuela. Low ranked countries are Albania, Belarus, Georgia, Kyrgyz, and Uzbekistan. Three of the four countries for which there was no (full) questionnaire, Mongolia, Tajikistan and Turkmenistan, would probably also rank this low. The fourth country, Azerbaijan, would probably be marginally better than these three. It is also clear from Figure three that the

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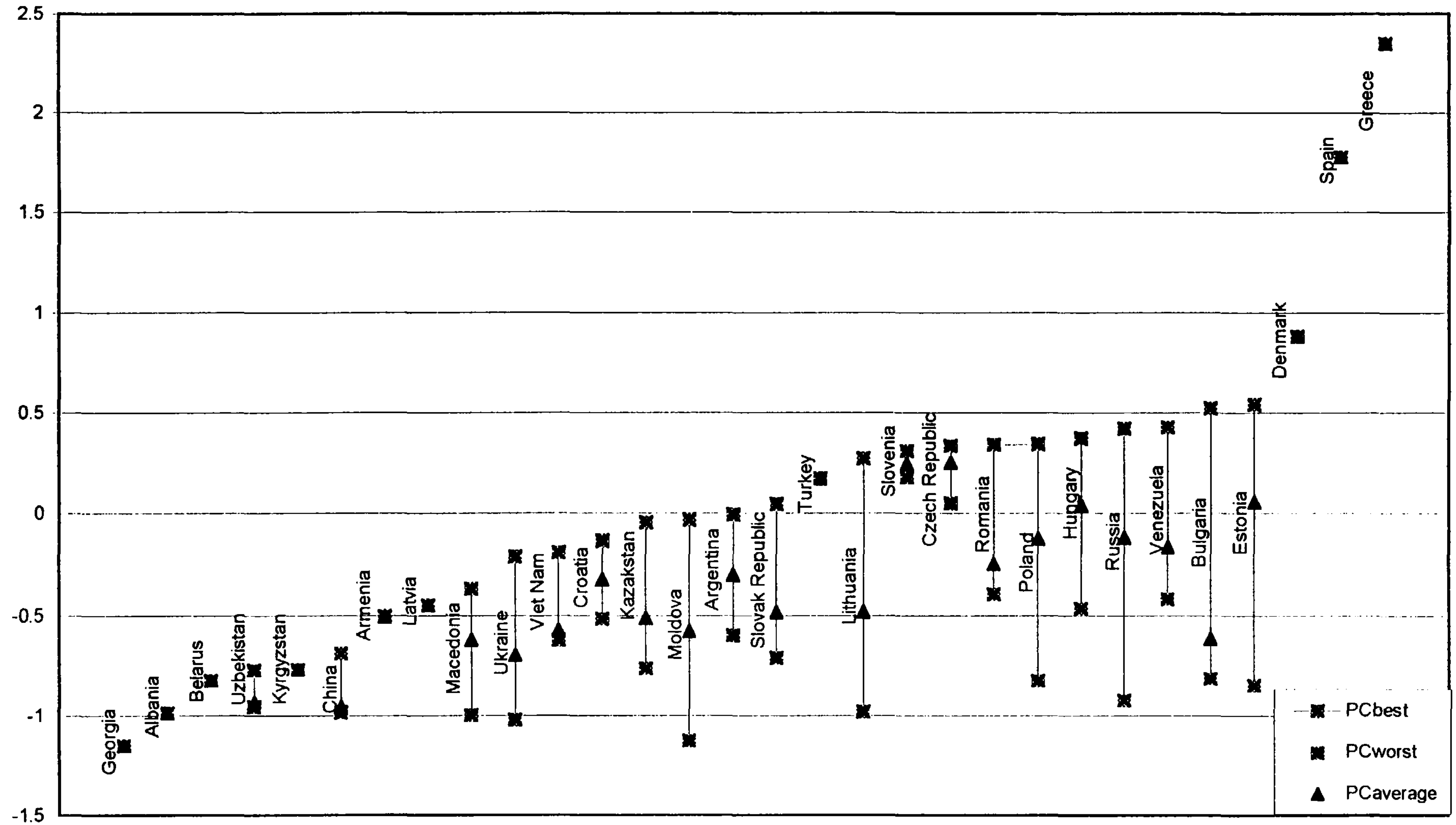
[14] In case of two responses, differences of opinion meant that there was a difference of more than one category. In case of three responses, differences of opinion were noted if all three answers were very different (for example, 1, 3 and 5). If the answers were close, for example, 1, 2 and 3, 2 was considered to be right. Altogether, there were 151 cases for 18 countries where opinions differed. These 151 cases amounted to 151/(18*58) or 14% of all answers.

[15] This may matter particulary for low-frequency events such as banking crises. Depending on whether one has lived through a banking crisis may greatly influence one's responses to these questions. I would like to thank Phil Brock for this example.

Figure 3: Ranking on the Basis of First Principal Components



Note: The first principal component from a principal components analysis of the scores on 31 questions for the quality of banks in the best and worst segments. Data also reported in Annex Table 3. Countries are sorted by the size of the best segment.

worst segments of the banking system show much less variation across countries than the best segments do;[16] the quality of many worst segments is simply very low. This lack of development of the worst segment in many transition economies also implies that, within countries, the spread between worst and best segments can be very large. Relatively, the worst segments are the farthest behind the best segments in the *new entry* countries. In CEE, there is generally less variation within countries; but notable exceptions are Bulgaria, Poland and Hungary that still have relatively very weak segments of varying asset sizes (the size of the worst segment in Bulgaria 85%, in Hungary 40%, and in Poland 40%). The Czech Republic, Slovenia and Slovakia appear to be the countries where the differentiation between strong and weak bank segments is the least. Depending on the size of the best and worst segments, the average will be of course closer to the best or worst.

Given the small differences in scores between some countries, it is more useful to use broad classes instead of exact scores. As the worst segment show much less variation across countries, the classification is done on the basis of the best segment. The best (or the only) segments of the banking system, and using all the indicators, can be classified in five classes as follows (Table 1, the worst segments are generally ranked in the bottom three classes).

[16] Excluding nontransition economies, the standard deviations of the quality of the best and worst segments are 0.51 and 0.33 respectively.

Table 1: Classification of Countries (Best Segments only)

Quality of best banks in the country	Country
5	No transition economy. Comparator countries: Denmark, Greece, and Spain.
4	Czech Republic, Estonia, Hungary, Poland, Russia, Slovenia. Comparator countries: Turkey.
3	Bulgaria, Croatia, Kazakstan, Lithuania, Moldova, Romania, Slovak Republic, and Vietnam. Comparator countries: Argentina and Venezuela.
2	Armenia, Azerbaijan, China, Latvia, FYR Macedonia, and Ukraine.
1	Albania, Belarus, Georgia, Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan, and Uzbekistan.

Notes: The classification is done for the best segment and uses a clustering technique, where answers to the same questions as to generate the first principal component were used. Four classes were first distinguished. Class 3 was then split into two classes (3 and 4) on the basis of the share of best banks, with countries with a market share (in terms of assets) of best banks equal to or larger than 50% assigned to the higher class (4). Azerbaijan, Tajikistan, and Turkmenistan were assigned using the classification of the EBRD (1995). Mongolia was assigned on the basis of a recent World Bank internal report. The classification using the clustering technique differs somewhat from that one would obtain from creating classes on the basis of the first principal component as a clustering technique creates similar groups on the basis of all available data.

How does the banking environment differ across countries?

The difference in quality in banks across transition economies may be attributable to differences in the quality of the environment for banking, including regulation and supervision and the general infrastructure. Figure four provides scores from the surveys for the quality of banking regulation and supervision, and scores for the quality of the banking infrastructure (quality of payment system, interbank market, accounting conventions, etc.) as well as the quality of the best banks.[17] There is much less variation in the quality of banking regulation and supervision and

[17] The indicators for the quality of banking regulation and supervision, and for the quality of the banking infrastructure are the simple averages of answers on 16 and 5 questions respectively, with scores from 1 through 5, where 5 denotes most or best.

banking infrastructure than in the quality of banks.[18] Furthermore, there is only a very weak positive association between the quality of the best banks and the other two measures, with that for banking infrastructure somewhat stronger than that for banking regulation and supervision. Only for Denmark, Greece, and Spain are the relationships strong and excluding these three countries, the correlations drop then also significantly. The correlations between the indicator for the quality of banks with that for the quality of banking regulation and supervision is 0.34 for the best segment and 0.02 for the worst segment; for transition economies only, the correlations between the quality of the best and the worst weak banks and the quality of the banking infrastructure are 0.38 and 0.15 respectively.[19] The lower correlations for transition economies alone could indicate the quality of the banking environment has mattered less to the quality of banks when compared to developed countries. In addition, regulation and supervision seems to have had less of an impact on the development of the banking system than banking infrastructure has had. This may reflect that good regulation and supervision take time to develop and the period since the onset of transition has simply been too short. Of course, there could also be (lack of) causality the other way: a good banking system may lead to a better infrastructure, but less so to good banking regulation and supervision.[20]

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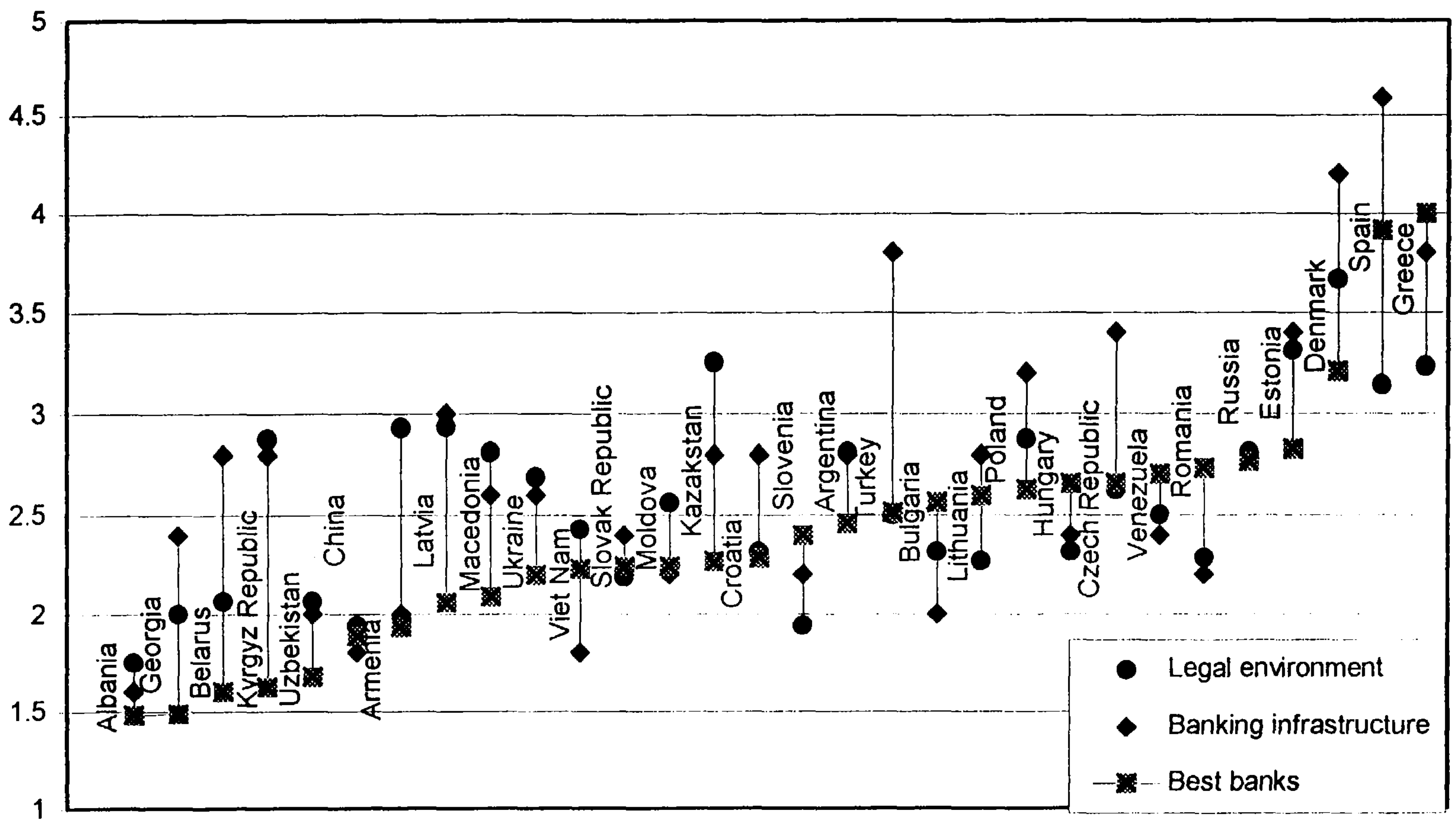
[18] To correct for the fact that the principal components have a mean of zero whereas these indexes do not, we calculated the coefficients of variation (standard deviations divided by the mean index) for the banking regulation and supervision and for infrastructure indexes, 0.18 and 0.21, respectively, which can be compared with the standard deviations of 0.51 for the first principal component for the best banks and 0.33 for the worst banks.

[19] With the three developed countries, the R^2s for the best segment increase to about 0.45 and 0.67 for the banking regulation and supervision and infrastructure indexes respectively.

[20] This is confirmed in simple regression of the indicators for the quality of the best banks on the two policy measures, where the quality of banking regulation and supervision is not significant for either the best or worst banks and where the quality of the banking infrastructure is significant for both segments.

Figure 4: Quality of Banking Regulation and Supervision, Infrastructure and the Quality of Best Banks



Notes: The average score for 16 (legal environment, i.e., banking regulation and supervision) and 5 (banking infrastructure) questions; and the average score for 31 questions on the quality of best banks. Average score instead of the first principal component is plotted to allow for a direct comparison with the scores for the banking environment. Countries are ranked by the quality of best banks. Data are also reported in Annex Table 3.

3. General Patterns and Lessons

General patterns and lessons for banking reform

Two broad observations emerge from how banking systems of transition economies—and segments within countries—rank: the rate of progress has varied and segmented banking systems have evolved. Rate of institutional progress can be faster under the *new entry* approach than under the *rehabilitation* approach. This is clear as the better segments of some *new entry* reformers (for example, Estonia, Russia, and Kazakstan) are now at par with *rehabilitation* reformers (like Hungary and Poland) or other countries at similar income levels (see Figure 3 and Table 1), even though their starting conditions were much worse. Or put differently, the high ranking of many *rehabilitation* reformers reflects more their better starting conditions than their progress since transition. This suggests that, in terms of institution and skill building, an approach with little (top-down initiated) reform of state banks and relatively liberal entry of new, private banks can be useful for less-advanced countries. Given their poor starting points, particularly, NIS could benefit from this decentralized institution-building approach (and indeed several have chosen so). Choosing the *new entry* approach could also be preemptive, as future remonetization would otherwise mainly go to the existing banks, which often have poor lending records and improve too slowly. Choosing the *rehabilitation* approach when faced with poor initial conditions could be the worst approach as progress is too slow. The lesson for more-advanced countries would be to rely less on reforming state-owned commercial banks (SOCBs) and more on entry of and competition by new, private banks.

Segmented banking systems have evolved in many countries with large differences between the worse segments, often SOCBs, and good segments, often of new private and privatized banks created through spontaneous breakups of SOCBs, or (foreign) joint venture banks. While the market share represented by the worst segment differs considerably across countries, the worst segments vary little in quality. The quality of better banks has only a weak relationship with the quality of weak banks in both new entry and rehabilitation countries (the correlation between the quality of the best and worst segments is only 39%). In contrast to the strong banks, the weak banks are thus not benefiting from new entry. Either the development of the worst segment is speeded up dramatically or the worst segment needs to explicitly segmented from the rest of the banking system (and the clients of it from the rest of the enterprise sector) to minimize negative spillovers.

As worst segments even exist in countries with relatively good banking supervision and banking infrastructure (for example, Poland), better infrastructure alone may not have improved the worst segments of the banking system (or for that matter contain the problems). Competition may neither been effective because of government policies that provide preferences to the worst segments (for example, tax relief) or that allow weak banks continued access to central bank facilities or to deposits attracted by above-market interest rates (for example, through explicit or implicit deposit insurance). The limited impact of competition may have been worsened by the fact that many of the state banks each had their own special sectors (for example, agriculture, housing); measures limiting enterprise reform may then also have protected these banks. A more level playing field is thus called for, particularly with respect to specialized banks. Eliminating direct government ownership is probably part of this. The alternative, segmenting the worst banks from the rest of the banking system, requires as a first step excluding these banks from (preferential or normal) access to central bank facilities if they are in violation of prudential and capital adequacy guidelines.

What are some specific lessons regarding government policies?

There are also relationships between specific government policies and the quality of banks which can provide for some specific lessons. In particular, the scores on individual questions on the survey are used directly in regressions trying to explain the quality of banks, separately for the worse and best segments, and including transition and non-transition economies. Since there are several questions on the survey covering similar policies issues, multicollinearity is extensive (multivariate regression results thus differ from univariate). A stepwise procedure is therefore used to identify the significant questions for the worst and the best segments separately. The five questions which are significant (some, however, at lower t-statistics levels) for both the best and the worst segments are then kept. Table 2 provides the results for the group of transition economies and comparator countries combined.

Table 2: Relationship of Specific Policies with Quality of Banks

	Number of observations	30		Degrees of freedom	24	
	First Principal Component for the Best Segment			First Principal Component for the Worst Segment		
		R2	0.67		R2	0.70
		adj. R2	0.60		adj. R2	0.64
Variable	**Coefficient**	**T- Stat**	**Sign.**	**Coefficient**	**T-Stat**	**Sign.**
Constant	-1.59	-3.65	0.00	-2.41	-5.77	0.00
Troubled Bank Intervention	0.30	2.44	0.01	0.41	3.23	0.00
Recapitalizations	0.17	3.67	0.00	0.05	1.21	0.23
Policy of Entry of New Banks	0.27	3.63	0.00	0.19	2.55	0.01
Activity of the Interbank Market	0.29	2.83	0.00	0.33	4.12	0.00
New State-Enterprise Banks	-0.07	-1.33	0.18	-0.17	-2.99	0.00

Notes: Dependent variables is the first principal component for the particular bank segment derived from the answers to 31 questions; the scores of the independent variables are indexes 1 through 5, with 5 best or most, and refer respectively to: the quality of troubled bank intervention (in large banks), the intensity (the number) of bank recapitalizations, the de-facto attitude towards of entry of new (domestic) banks (with the more liberal the higher the score), the activity of the local currency interbank market, and the degree of new banks established by state enterprises. The regressions include both transition economies and non-transition economies. but exclude Tajikistan as no full questionnaire was available. The t-statistics correct for heteroskedasticity using White's (1980) procedure.[21]

[21] Since the independent variables are ordinal—and to some extent the first principal components suffer from this too as they are derived from ordinal measures, OLS may be biased. Calculating Spearman (rank) correlations leads to similar results for the best segment, however, as all five variables have significant rank correlations (with the same sign). For the worst segment, only the quality of troubled bank intervention and the intensity of bank

Four individual factors have a positive relationship with the quality of both the best and worst banks: the quality of troubled bank intervention (in large banks), the intensity of bank recapitalizations, the attitude towards entry of new (domestic) banks, and the activity of the interbank market. There is a negative relationship between the degree of new banks established by state enterprises and the quality of banks (significant for the worst banks).

The fact that the quality of troubled bank intervention has an about equally positive relationship with both the best and worst banks suggests that the main benefit of troubled bank intervention is through signaling a certain policy stance. If actual direct intervention, presumably mainly in weak banks, would have been the most important aspect of troubled bank intervention, one would have expected that the relationship with troubled bank intervention would have been less strong (or even absent) for the best segment and stronger for the worst segment. The fact that the intensity of recapitalizations is positively related to the quality of the best banks (and very weakly positive for the worst banks) can be for two reasons: one, ceteris paribus, formal recapitalizations (and associated policy measures) improve the quality of the banking system, particularly of the best banks; and two, formal recapitalizations are more likely to take place when the overall banking system is better. Since the relationships refer to the institutional quality of banks, the first explanation would in itself not be sufficient evidence to argue that bank recapitalizations are a good use of fiscal resources (for example, DECVP (1995) argues strongly that bank recapitalizations are most often not). The second would confirm the notion that the rehabilitation approach (which typically includes recapitalization) is more likely when initial conditions are better.

The regression results suggest that a liberal policy towards entry can raise the quality of banks, both through competition and innovation. Entry through state enterprises establishing banks has drawbacks, however, as relative more of these banks turn out to be poor, thus negatively affecting banks quality, especially of the weak bank segment (and more marginally of the better banks). The positive relationship between the quality of the interbank market and the quality of banks likely reflects demand (that is, better banks leading to better infrastructure) and supply (that is, better infrastructure leading to better banks) forces.

These regressions refer to the five variables which are significant for both the best and worst segments. There are also some relationships which only hold for one segment. In particular, there is a significant positive relationship between the quality of the best banks and the quality of banking supervision. The causality is unclear, however. Countries with better banks may more likely have better banking supervision, regardless of the effect of supervision on the quality of banks, or better banking supervision may have a positive effect on the quality of banks. The first is the most likely as the time period since banking supervision has been in place in most transition economies is too short to expect a strong effect of it on the institutional development of banks. For the worst segment, "the application of the central bank and banking acts which are

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recapitalizations have significant rank correlations. A multivariate rank-on-rank regression leads to the same results for the best segment (except that the significance for entry of new state-enterprise banks drops to 0.37 from 0.18). For the worst segment, the significance of policy of entry new banks and the degree of new banks established by state enterprises drops to 0.16 and 0.21 respectively. The other three variables remain significant more conducive to an efficient and sound banking systems" has a negative relationship with quality. Also, a more "competition in banking" attitude of the authorities has a negative relationship with the quality of the worst segment. One interpretation could be that a more favorable attitude of the government towards banking and competition leads to more actual competition which worsens the worst banks, instead of encouraging them to improve. As also noted above, the degree of banks being privatized to state enterprises and of new private banks being established also have negative relationships with the quality of the worst segment. As for the result above on general entry, this may reflect that with more liberal privatization and entry the quality distribution widens and weak banks more likely arise.

There is also lack of certain relationships, which is also informative. There are no significant, robust relationships between the quality of both the best and worst banks and the degree of state bank privatization. This may reflect the large variety in approaches to bank privatization—for example, spontaneous break-ups followed by implicit privatization as owners are privatized, voucher privatizations, and formal recapitalizations followed by cash privatizations—and the associated wide range in outcomes. The quality of payment and clearing systems, and the quality of accounting standards are also not significantly related to bank quality. This may reflect that these institutions take a long time to develop—and even a longer time before they have an impact on the quality of banks—as well as that they are in part demand-driven.

4. Which structural factors and initial conditions matter?

The results for the quality of the banking systems are also related to some "structural" conditions, such as those underlying the data reported in Annex Table 1, and the initial conditions of the particular transition economy. For the latter, de Melo et al. (1996) develop two proxies for transition economies. The first refers to the degree of initial distortions and the second to the initial level of industrialization (or development).[22] The relationships between the "structural" variables and initial conditions' proxies using univariate regressions are summarized in Table 3 (results are for transition economies only). The explanatory power (R^2) is generally better for the worst segments than for the best segment, but the significance of the structural variables and proxies is higher for the best segment than for the worst segment. This basically reflects the lower variability in the quality of the worst segment which increases the overall explanatory power—through the intercept in the regressions—while that of the structural variables is less.

[22] The proxies are the first two principal components derived from 12 variables as of 1989 or 1990 for CEE and NIS, 1978 for China and 1986 for Vietnam, which include trade dependency, repressed inflation, black market premium, length of time under central planning, resource endowment, and per capita income.

Table 3: Results from Univariate Regressions

Independent Variable	Best Segment	Worst Segment
Employment (per 100,000)	+	+
Financial Depth (broad money as a share of GDP)	+ (12%)	+
Financial Depth (with China dummy)	+	+
Share of private sector in GDP, 1995	+	+(8%)
Currency Share in Broad Money	-	- (10%)
Market Share of Top Five Banks (assets)	-	- (16%)
Number of State Owned Banks	-	- (40%)
Number of Banks	+	-
Initial Level of Development Proxy	+	+ (6%)
Initial Distortions Proxy	-	-

Notes: The underlying data for the regressions are reported in Annex Tables 1 and 3, and in de Melo et al (1996). The figure in parentheses indicates the significance level when worse than 5%; all other coefficients are significant at the 5% level or better. Results are for 24 transition economies only.

The number of employees in banking per 100,000 population has, as could be expected, a positive association with the quality of the best and worst segments. Financial depth (at the end-of-1994) has a positive relationship with the quality of both best (significant at 12% only) and worst banks, which may reflect that many rehabilitation reformers—which have higher financial depth and better starting positions—still have better banks than many new entry reformers—which have lower financial depth and worse starting conditions. China is an outlier, however, as it has high financial depth and low banking skills; a dummy for it is then also significantly negative in this regression (and in many other regressions).

The share of the private sector in 1995 GDP has a positive relationship with the quality of the best and worst (significant at 8% only) segments, confirming the important complementarity between enterprise and banking reform.[23] The higher the share of domestic cash in broad money (M2, including foreign currency deposits), the lower the quality of the best and worst (significant at the 10% level) banks. This suggests that households act rationally: they will keep their money under the mattress if the banking system is poor.

The concentration of the banking system (market share of top five banks) has a negative relationship with the quality of the best and worst (significant at 16% only) segment, confirming again the benefits of rapid new entry for institution-building. The quality of the best segment is also negatively related to the number of state-owned banks. These two relationships together

[23] Economic growth over the 1990-1994 period does not have a significant (linear) relation to banking quality. Rank-correlations between economic growth over the 1990-1994 period and the quality of best and worst bank are somewhat more significant (at the 13% and 11% level respectively, with the weighted average quality at 18% level).

suggests that an oligopolistic structure restrains institutional progress in both the best and worst segment, possibly even more with state-ownership of banks. This is further confirmed as the quality of the best segment is positively related to the number of banks. At the same time, the quality of the worst segment is negatively related to the number of banks. These two relationships may just reflect that with more liberal entry the quality distribution widens and more weaker as well as more stronger banks arise (which makes the respondents of the survey better able to distinguish weak from strong banks). It may also indicate that more competition stimulates the development of strong banks, but has adverse affects on weak banks. There is thus strong evidence that in transition economies higher market concentration has inhibited institutional progress.[24] There is also evidence, however, that an excessive liberal entry policy can lead to many weak banks.

The proxy for the level of initial development is positively related to the quality of the best and worst (significant at only 6%) segments. But, the explanatory power of the initial level of development is very low, only 14% for the best segment and 8% for the worst segment. The proxy for the level of initial distortions is negatively related to both the best and worst segments (here dummies for China are still significant as the level of distortions in China was relatively low). Here, the degree of explanatory power is reversed, 10% for the best segment and 18% for the worst segment. The explanatory power of the regressions when including both proxies for initial conditions is similar for both segments, 28% for the best segment and 31% for the worst segment.

Multivariate regressions which do not include initial conditions confirm that (signs of the coefficients in parentheses) depth (+) and market share of top five banks (-) are jointly significant for the best segment; and that depth (+), market share of top five banks (-), and number of banks (-) are jointly significant for the worst segment. For the average quality, depth (+, at a 13% significance-level), market share of top five banks (-), and number of banks (-) are jointly significant. When including the two initial conditions proxies (signs of the coefficients in parentheses) the market share of the top five banks (-), the initial level of distortions (-) and the initial level of development (+, at a 6%-level) are jointly significant for the best segment; and the market share of top five banks (-), the number of banks (-), the intensity of recapitalizations (+), the initial level of distortions (-) and the initial level of development (+, at an 11%-level) are jointly significant for the worst segment. For the average quality, the market share of the top five banks (-) (or the number of banks (+)), the initial level of distortions (-) and the initial level of development (+) are jointly significant. The main difference when including the two initial conditions is that financial depth is not longer significant. This is because financial depth at the

[24] Caprio and Summers (1995) argue, when banks are private and motivated by profits, that franchise values—maintained through restricting competition—are important for prudent banking. Here it is argued that increased competition may advance institutional progress in private banks. There is not necessarily a contradiction: the difference lies in the peculiar circumstances of the transition economies where financial institutions were very weak. The point made here is that decentralized institutional building, helped by liberal entry, can be quicker than top-down, rehabilitation institution building. Depending on how one weighs stability versus institution building in transition economies, the merits of more competition will be of course different. Gorton and Wilton (1996) argue that "some instability of banks is socially desirable in transition economies" as it helps break link between lenders and borrowers!

end of 1994 depends to a significant extent on the initial levels of distortions, most importantly, of course, the degree of repressed inflation.

As mentioned, the explanatory power of the initial conditions is about 30%.[25] The relatively low explanatory power suggests that the current quality of the financial system reflects only partly starting conditions, and to significant extent progress since then, particularly for the best segment. When including both initial conditions the following countries have an average quality of their banking system which is significantly better (that is, these country dummies are significantly positive when including the two initial conditions proxies): Estonia, Russia, Kazakstan, Slovenia, Czech Republic, Viet Nam, Hungary, and Moldova, where the countries are ranked from best to better relative to initial conditions. Countries with relative to initial conditions worse banking systems are: Georgia, Albania, Slovakia, Macedonia, Bulgaria, and Belarus where the countries are ranked from worst to better relative to initial conditions.

It is interesting to note that countries which pursued the *new entry* approach (Estonia, Russia, and to some degree Kazakstan) as well as countries which pursued the *rehabilitation* approach (Hungary and Slovenia) have banking systems which are better relative to initial conditions. Several countries which did pursue *rehabilitation* approach, such as Bulgaria and Poland, however, have systems which are not better relative to initial conditions. This suggest that progress under the *new entry* approach can be at least as rapid as under the *rehabilitation* approach. No financial reform is clearly the worst approach as several of the countries with banking systems which are worse relative to initial conditions have had little reform of any kind (for example, Belarus and Ukraine). When correcting the quality of the best and worst segments separately for initial conditions, there are about as many (9) countries that have best banks significantly better relative to initial conditions than there are countries that have significantly worse best banks (10). But, more (11) countries have weak banks which are worse relative to initial conditions than there are countries with weak banks which are better relative to initial conditions (only 8). This suggests that, relative to initial conditions, financial reforms (or the lack thereof) have been the least successful in improving weak banks.

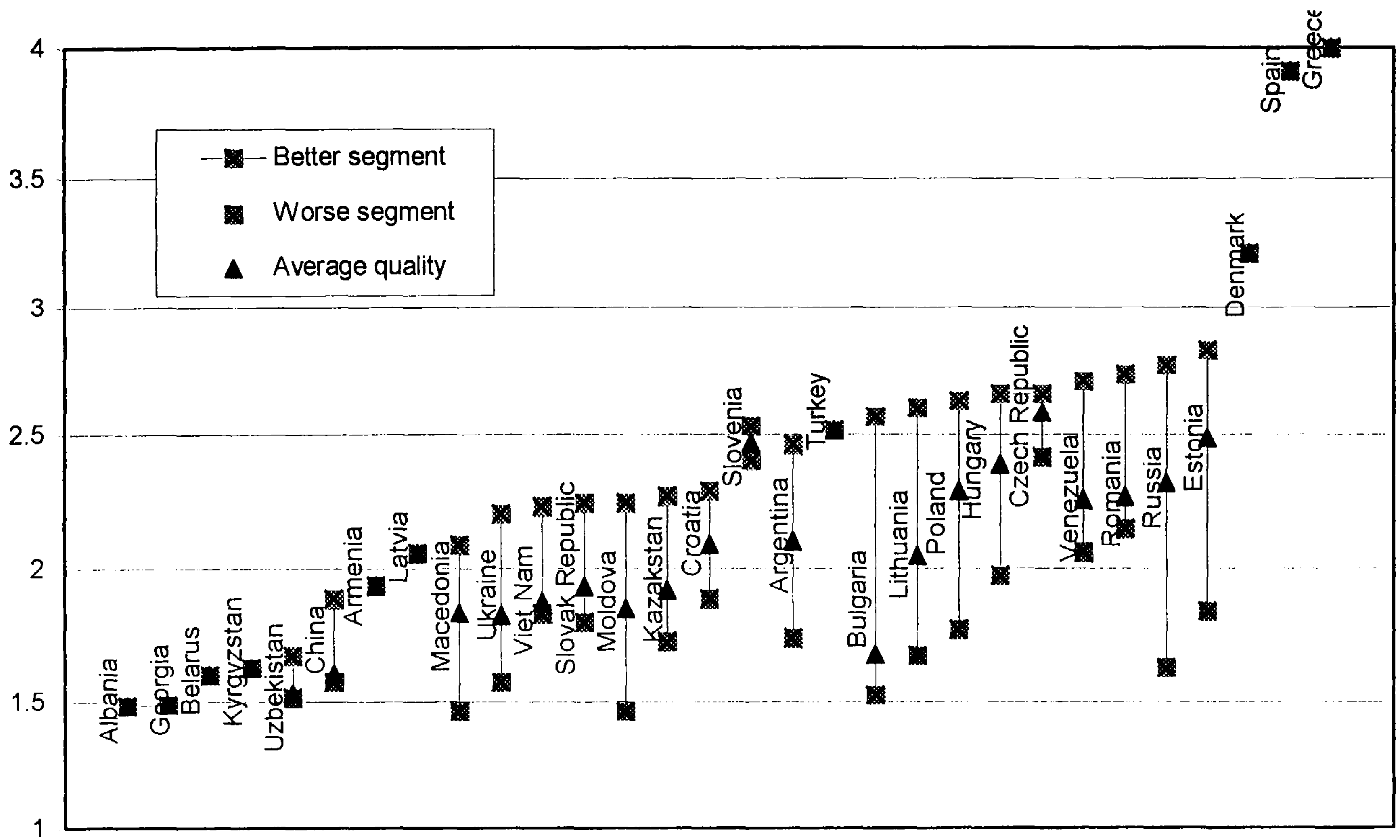
[25] This explanatory power is arguably still overstated since the two regressions include intercepts, which provide most of the explanatory power, especially for the weak segment.

5. Conclusions

Progress in institutional capacity of banks tends to be faster under the *new entry*—with more liberal entry—than under the *rehabilitation* approach. Choosing the *rehabilitation* approach strategy when faced with a weak institutional legacy can thus be a poor policy as progress is slow. Regardless of reform approach, weak banks have generally evolved little from central planning, even in countries with a good banking infrastructure. Excessive concentration, preferential treatment by governments and limited entry appear to inhibit progress in these banks. The main lessons are that banking reform approaches in transition economies should stress decentralized institution-building and penalizing weak banks.

Because of weak legal infrastructures, problems associated with highly leveraged financial intermediaries—such political interference, fraud and implicit guarantees—limited institutional development, much uncertainty and inside information, the role of banks will nevertheless still remain limited in many transition economies. Self-finance, intermediation among enterprises and through non-bank financial institutions are in the short run better solutions for many transition economies. These forms of finance are closer to enterprises, have better information, are less susceptible to political pressures, and have often less stringent demands on the legal infrastructure than banks do. They may also help improve the static and dynamic efficiency of the banking system by providing competition and driving out weak financial institutions.

Annex Figure 1: Quality of Best, Average and Worst Banks



Note: The average of the responses for the 31 questions of bank quality was used.

Annex Table 1: Data on Structure Of Banking System

	Number of banks	Number of SOCBs	Share of assets of top five banks (%)	Recapitalizations[1]	Employ/ 100,000[2]	M2[3]/GDP (%)	Currency[4]/ M2 (%)
Albania	8	3	100	y	838	45	37
Armenia	37	5	85	n	227	23	42
Azerbaijan	197	4		n	140	26	64
Belarus	52	7	75	n	323	11	25
Bulgaria	34	10	90	y	624	65	14
China	19	7	90	n	199	91	15
Croatia	47	19	70	y	854	21	24
Czech Republic	58	1	69	y	3136	74	10
Estonia	16	1	70	y	1940	20	44
Georgia	203	5	90	n	219	3	56
Hungary	41	3	63	y	1746	43	26
Kazakstan	167	4	90	n	317	11	58
Kyrgyz Republic	17	3	90	n	189	11	78
Latvia	40	3	55	y	2037	30	43
Lithuania	27	3	70	n	890	17	42
FYR Macedonia	40	3	97	y	571	25	22
Moldova	27	4	85	n	223	8	51
Poland	73	5	66	y	614	31	26
Romania	28	7	74	y	1349	15	30
Russia	2561	1	33	n	392	15	42
Slovak Republic	30	2	79	y	2085	67	13
Slovenia	34	2	70	y	1678	37	10
Tajikistan	14	14	90	n	112	42[5]	58
Turkmenistan	21	11	90 x	n	169	13[6]	47
Ukraine	217	2	70	n	254	16	37
Uzbekistan	35	29	95	n	128	79	26
Viet Nam	62	4	90	y	N/A	22	58
Mongolia	14	1	90	n	158[7]	23	31
<u>Comparator Countries[8]</u>							
United Kingdom	530		29		4140	90	3
France	419		43		3211	63	6
Spain	154		39		1536	82	13
Greece	35		63		1147	66	17
Denmark	124		77		4161	58	4
Turkey	68		45		790	32	10
Venezuela	41				2236	29	9
Argentina	166		40		360[7]	11	22
Developed countries	192		50		2909	71	8

Notes: Except where noted, the source of the data is World Bank Staff estimates, IMF, EBRD, central bank reports, and other published sources. Number of banks includes the number of SOCBs (= State-Owned Commercial Banks, defined as banks where the state directly holds more than 50% of equity). Unless noted otherwise, data refer to the situation as of the middle of 1995 and are estimates.

1. Recapitalizations refer to formal recapitalization programs; it excludes ad-hoc recapitalizations (such as the carving out of a loan for an enterprise which is privatized).
2. For all countries, except where noted, the number refers to employees in the whole financial sector, not just banking, and the real estate sector. For NIS, the source is the CIS Statistical Office Database and the data are for 1994; for other countries the source is ILO (1995) and data are for 1993.
3. Domestic currency component of broad money (M2) only. Data are averages of quarterly M2/GDP ratios to account for the effects of high inflation.
4. Cash holdings as a share of domestic currency broad money (M2). End-of-1994 data except where noted.
5. 1993.
6. 1993.
7. Only banking sector.
8. For comparator OECD countries, the data for the number of banks and market shares are for 1992 and the source is OECD (1993).

Annex Table 2: Number of Responses and Differences of Opinion

Country	Number of responses	Number of Differences of Opinion
Albania	3	10
Argentina	2	6
Armenia	2	4
Belarus	2	15
Bulgaria	1	
China	3	8
Croatia	2	14
Czech Republic	1	
Denmark	1	
Estonia	2	14
Georgia	1	
Greece	1	
Hungary	3	6
Kazakstan	2	2
Kyrgyz Republic	3	10
Latvia	1	
Lithuania	1	
FYR Macedonia	1	
Moldova	2	18
Poland	3	8
Romania	1	
Russia	2	8
Slovak Republic	3	9
Slovenia	2	4
Spain	1	
Tajikistan[26]	1	
Turkey	1	
Ukraine	3	6
Uzbekistan	3	6
Venezuela	1	
Vietnam	2	3
Total: 31 Countries	57	151

Notes: In case of three questionnaires, differences of opinion were noted if all three answers were very different (for example, 1, 3 and 5). If the answers were around the same value, then the average was used (for example, if the scores were 1, 2 and 3, then 2 was used)

[26] Only a partial response was received as no extensive mission had yet taken place.

Annex Table 3: Individual Country Score
(Sorted by the score for the best segment)

Country	Principal Component of Best Segment	Principal Compone t of Worst Segment	Average Score for Best	Average Score for Worst	Average Principal Componen t	Average Score for Legal	Average Score for Infra-structure
Georgia	-1.15	-1.15	1.49	1.49	-1.15	2.00	2.40
Albania	-0.99	-0.99	1.48	1.48	-0.99	1.75	1.60
Belarus	-0.82	-0.82	1.60	1.60	-0.82	2.06	2.80
Uzbekistan	-0.77	-0.95	1.68	1.51	-0.93	2.06	2.00
Kyrgyz Republic	-0.77	-0.77	1.63	1.63	-0.77	2.88	2.80
China	-0.68	-0.98	1.89	1.57	-0.95	1.94	1.80
Armenia	-0.50	-0.50	1.94	1.94	-0.50	2.93	2.00
Latvia	-0.45	-0.45	2.06	2.06	-0.45	2.94	3.00
FYR Macedonia	-0.36	-1.00	2.09	1.46	-0.62	2.81	2.60
Ukraine	-0.21	-1.02	2.20	1.57	-0.70	2.69	2.60
Vietnam	-0.19	-0.62	2.23	1.83	-0.57	2.43	1.80
Croatia	-0.13	-0.51	2.29	1.89	-0.32	2.31	2.80
Kazakstan	-0.04	-0.76	2.27	1.73	-0.51	3.25	2.80
Moldova	-0.03	-1.12	2.24	1.46	-0.58	2.56	2.20
Argentina	-0.00	-0.60	2.46	1.74	-0.30	2.81	2.80
Slovak Republic	0.05	-0.71	2.24	1.80	-0.48	2.19	2.40
Turkey	0.17	0.17	2.51	2.51	0.17	2.50	3.80
Lithuania	0.27	-0.98	2.60	1.68	-0.48	2.27	2.80
Slovenia	0.31	0.18	2.53	2.40	0.24	1.94	2.20
Czech Republic	0.33	0.05	2.66	2.41	0.25	2.63	3.40
Romania	0.34	-0.39	2.74	2.15	-0.25	2.29	2.20
Poland	0.34	-0.82	2.63	1.77	-0.12	2.88	3.20
Hungary	0.37	-0.46	2.66	1.97	0.04	2.31	2.40
Russia	0.42	-0.92	2.77	1.63	-0.12	2.81	2.80
Venezuela	0.43	-0.42	2.71	2.06	-0.16	2.50	2.40
Bulgaria	0.52	-0.81	2.57	1.52	-0.61	2.31	2.00
Estonia	0.54	-0.85	2.83	1.84	0.06	3.31	3.40
Denmark	0.88	0.88	3.21	3.21	0.88	3.67	4.20
Spain	1.77	1.77	3.91	3.91	1.77	3.14	4.60
Greece	2.35	2.35	4.00	4.00	2.35	3.23	3.80

Notes: Results from principal components analysis and the average of the scores on 31 questions for the quality of banks, and the average of the scores on the 16 questions for legal (banking supervision and regulation) and 5 infrastructure questions.

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